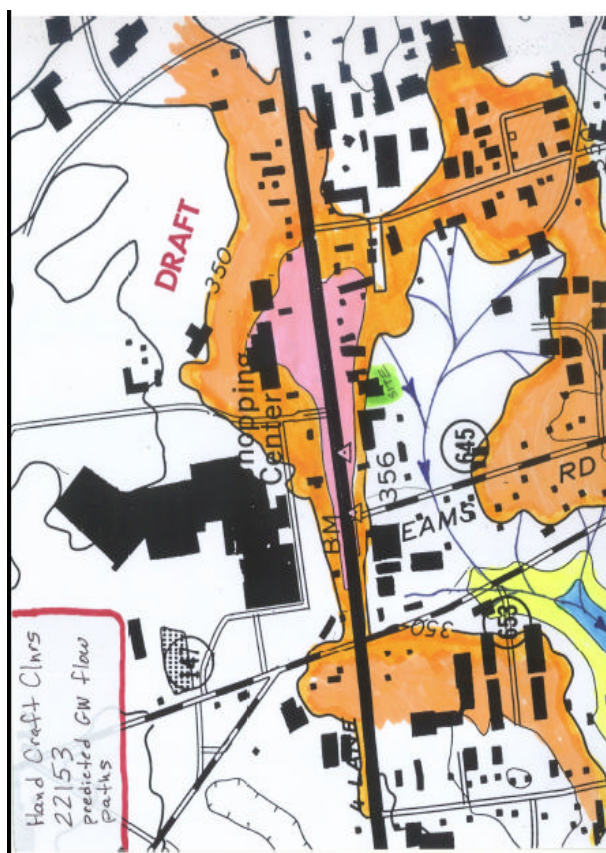


Region 3 GPRA 2020 Baseline RCRA Corrective Action Facility

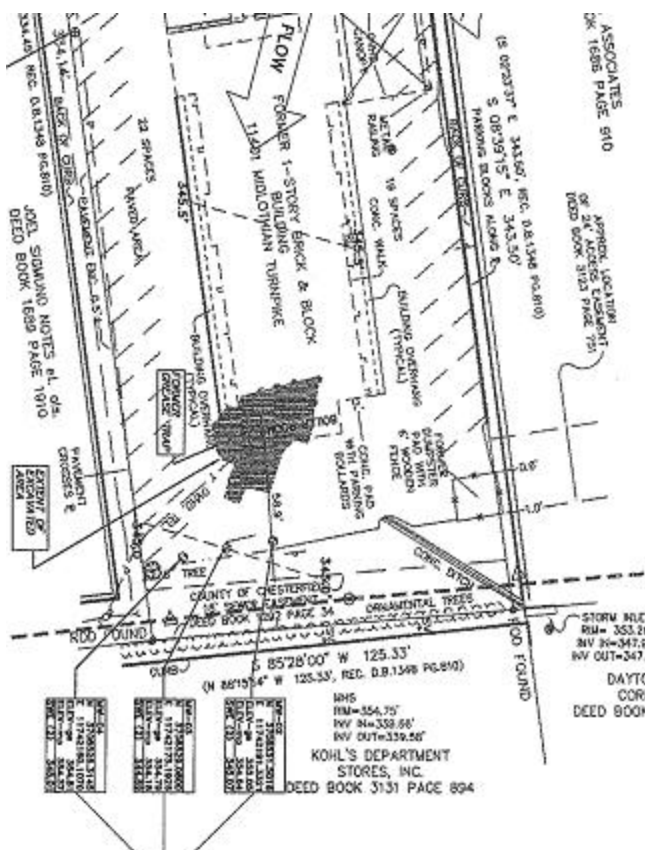
HAND CRAFT CLEANERS

HAND CRAFT CLEANERS
11401 MIDLOTHIAN TURNPIKE
MIDLOTHIAN, VIRGINIA
EPA ID Number: VAD988169819
01/08/2009

Facility Location & Topographic Site Map



Partial Site (Well Location) Map



Current RCRA CA Activities

Corrective action (CA) site investigations and any necessary clean up activities at the Hand Craft Cleaners (Hand Craft) in Midlothian, Virginia, are being implemented in accordance with the

conditions and requirements of the EPA Region III Facility Lead Corrective Action Program under the Resource Conservation and Recovery Act (RCRA). On January 14, 2002, Hand Craft submitted a letter of commitment and entered into a Facility lead Agreement (FLA) with the U.S. EPA to address CA at the facility site under the RCRA.

The U. S. EPA has delegated the Virginia Department of Environmental Quality (DEQ) as the lead agency for technical and administrative oversight of corrective action (CA) activities at Hand Craft facility under the FLA under the RCRA.

The Hand Craft facility is on the RCRA Corrective Action GPRA Baseline List (2020 CA Universe List).

The site investigations and clean up activities at the facility site are also to address the closure requirements associated with the former excavation trench under the Virginia Hazardous Waste Management Regulations (VHWMR), which incorporates the RCRA Regulations by reference. The former excavation trench is considered a hazardous waste management unit (HWMU) under the VHWMR and the RCRA and is subject to closure requirements. At this time, the facility has received the DEQ's approval of "clean closure" for clean up of the soils at the facility site. The remediation goal is to achieve "clean closure" for groundwater under the submitted Closure Plan and to concurrently meet the CA requirements of the FLA.

The FLA approach encourages RCRA corrective action facilities to take the lead in addressing corrective action using a generic, non-enforceable, agreement which includes the same requirements, and relies on the same scope of work and policy as a permit or an order.

A *Groundwater Monitoring and Remediation Plan* (GWMRP) was prepared October 1999, and revised November 2000, February 2001, and March 2001. The GWMRP was initiated to address the groundwater related closure requirements of the HWMU under the VHWMR and the RCRA. Groundwater sampling and analysis has been completed on a quarterly schedule since September 2001. Groundwater has been analyzed for the initial constituent of concern (tetrachloroethene, PCE) and its potential degradation products (chlorinated ethenes). By May 2008, 22 rounds of monitoring (sampling, analysis and data evaluations) have been completed.

Remediation of groundwater, by an in-situ groundwater treatment, was initiated at the time of the closure activities for soil and is still ongoing at the facility. In April 2004, a *Pilot Study: GW Remediation - Proposed Work Plan* was approved by the Department of Environmental Quality (DEQ) and sodium permanganate (NaMnO_4) was injected at several locations into the uppermost aquifer to oxidize PCE and its daughter products to CO_2 , H_2O and Cl^- (Chloride).

The facility's Closure Plan is currently being updated by the facility and the DEQ to guide closure, monitoring, and remediation activities for the next few years so to enable the facility to demonstrate "clean closure" of the HWMU under the VHWMR and the RCRA, and to meet the CA requirements under the FLA.

Site Description

The Hand Craft Cleaners property is located at 11401 Midlothian Turnpike (US Route 60), approximately 0.5 miles east of the intersection of Midlothian Turnpike and Courthouse Road east of Midlothian, Chesterfield County, Virginia.

The subject facility was originally constructed to serve as a Ponderosa Steak House restaurant. Hand Craft Cleaners purchased the property in 1987 and operated the facility as a dry cleaning and healthcare business using solvent tetrachloroethene (PCE) until 1996, during which the facility was subsequently closed.

On July 17, 1998, Hand Craft Cleaners secured the services of Draper Aden Associates to help determine if chlorinated organic compounds had been released to the subject property. Draper Aden Associates subsequently determined that chlorinated compounds had been released to an underground grease trap tank (which was located adjacent to the southwest corner of the building and subsequently became known as the Excavation Trench).

Based upon the results of a preliminary study, the facility planned to excavate two trenches to further explore for contaminated soils. On August 31, 1998, Draper Aden personnel documented the excavation of two trenches at the facility. Trench 1 was excavated perpendicular to the contaminant plume (as identified during the initial study). Trench 2 was excavated parallel to the axis of the plume, between the tank excavation and Trench 1.

A first GWMRP was prepared in October, 1999 and subsequently revised in November 2000, and in February 2001, with the last revision approved in March 2001. The GMRP is currently being updated.

Closure activities were then initiated in cooperation with the Virginia Department of Environmental Quality (DEQ) under a DEQ-issued Consent Order dated November 4, 1999. Closure activities in accordance with an approved closure plan concluded that both soil and GW were contaminated by contaminants.

On July 31, 2002, EPA and the Virginia DEQ cosigned a "Comfort Letter" to Hand Craft assuring them that remediation of the soils had been completed for the Excavation Trench as well as a second regulated unit known as the Waste Pile. According to the comfort letter, clean-up at the site consisted of the closure for unsaturated soils at the two regulated units (Waste Pile and Excavation Trench), the removal of soil contamination related to Solid Waste Management Units (SWMUs), and on-going GW remediation and monitoring near the southern boundary of the property (addressed under this GW monitoring and remediation plan).

By 2002, the facility had excavated over 325 cubic yards of contaminated soil to address the closure requirements for the Excavation Trench under the VHWMR and the RCRA and had completed a RCRA Facility Assessment.

On January 6, 2003, “clean closure” for the unsaturated soils at the Excavation Trench, a HWMU, was approved by the DEQ.

RCRA CA Milestones

To date, the following Resource Conservation and Recovery Act (RCRA) CA milestones have been completed at this facility:

- On August 31, 1998, Draper Aden personnel documented the excavation of two trenches at the facility. Trench 1 was excavated perpendicular to the contaminant plume (as identified during the initial study). Trench 2 was excavated parallel to the axis of the plume, between the tank excavation and Trench 1.
- A GWMP was prepared October, 1999, revised November, 2000, revised February, 2001, revised and approved March, 2001.
- In a letter dated July 2, 2001, DEQ approved the potential injection of HRC and/or chemical oxidants at the Hand Craft Cleaners facility. Subsequent to DEQ approval (2001) Hand Craft Cleaners injected potassium permanganate into several shallow wells that were constructed for that particular purpose. During remedial excavation of additional soils (2001), Hand Craft Cleaners injected potassium permanganate into the open excavation.
- On June 14, 2002, EPA issued a Facility Lead Agreement to Hand Craft Cleaners for the investigation and remediation.
- On July 31, 2002, EPA and DEQ cosigned a “comfort letter” to Hand Craft Cleaners assuring them that remediation of the soils had been completed.
- In 2002, the facility completed a RCRA Facility Assessment and excavated over 325 cubic yards of soil.
- The facility submitted its final “Closure Report for Excavation Trench – Unsaturated Soils” in September 2002 (received September 3, 2002). After a review of the closure certifications, closure verification inspection results and the closure report, clean closure for unsaturated soils based on risk-based remediation endpoints for residential use and transfer to GW was approved by the DEQ on January 6, 2003.
- On March 24 and 25, 2004, Vironex personnel injected sodium permanganate at several locations along the back wall of the Pier 1 Imports building, and the PCE and its daughter products quickly decreased in concentrations. However, within two years the concentrations of PCE and its daughter products rebounded.

- In April 2004, a Pilot Study: GW Remediation - Proposed Work Plan was approved by the Department. By the GW Remediation Plan sodium permanganate (NaMnO₄) would be injected underground into the uppermost aquifer to oxidize and decompose PCE and its daughter products to CO₂, H₂O and Cl⁻ (Chloride). Six injectors were constructed downgradient of the excavation trench (between the trench and three GW monitoring wells); three injectors were constructed immediately upgradient of the excavation trench (one outside the former building, two within the building before it was demolished. Concentrations of PCE and its daughter products quickly decreased to below their respective MCLs.
- On July 11, 2004, Draper Aden Associates constructed the additional GW monitoring well MW-OFF-1 at an off-site location approximately 1,000 feet downgradient of the former Hand Craft Cleaners facility to evaluate off-site impacts. In a report dated October 12, 2004, the facility reported that the concentrations of all targeted constituents were found to be less than their respective limits-of-detection during two sampling events in July 2004.
- During August 8 through 17, 2006, Vironex personnel secondly injected approximately 4500 gallons of permanganate solution at 52 locations along the back wall of the Pier 1 Imports building. Contaminant concentrations have stayed below MCLs since that time.
- In July 2008, the facility submitted to the DEQ an amended *Closure Plan – Excavation Trench and Groundwater Monitoring and Remediation*. The DEQ provided review comments to the facility in October 2008.
- On December 19, 2008, the DEQ received the amended *Closure Plan – Excavation Trench and Groundwater Monitoring and Remediation*, revision date November 2008, to address the DEQ's previous review comments. The DEQ is currently in the process of reviewing the submittal. Approval of the amended Closure Plan is anticipated.

Details and the supporting documentation regarding the above can be obtained by reviewing the files at DEQ's Central Office or by contacting the project managers identified in this fact sheet.

Environmental Indicator Status

Under the Government Performance and Results Act (GPRA), the Environmental Protection Agency (EPA) set national goals to address high priority RCRA CA facilities by the year 2008 and medium/low priority facilities by 2020. This facility is one of EPA Region 3's medium/low priority facilities and falls under the RCRA Corrective Action GPRA Baseline List (2020 CA Universe List).

EPA is evaluating two key Environmental Indicators (EIs) for each facility: Current Human Exposures Under Control and Migration of Contaminated Groundwater Under Control.

The current Environmental Indicator Status for this facility is:

- *Human Exposures Controlled Determination:* The DEQ has not made the EI determination of "current human exposures are under control." The above determination is expected to be a "yes," based upon the clean-closure of soils determination and groundwater EI below; however, the Current Human Health Environmental Indicator (HHEI) Determination Report, will be completed during Fiscal Year 2009.
- *Release to Groundwater Controlled Determination:* The DEQ has made the EI determination of "yes," that migration of contaminated groundwater is under control," based upon the review of CA information for the site contained in the Groundwater Environmental Indicators (GWEI) determination Report, dated September 8, 2008. The above GWEI determination indicates that the migration of "contaminated" groundwater is believed to be under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater." This GWEI determination is considered current, effective January 8, 2009.

Contaminants

The contaminants which have been detected present in the soil and groundwater include tetrachloroethene (PCE) and its potential degradation products [trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride (chloroethene; VC)] ("contaminants"), which appeared to exceed their respective Maximum Contaminant Levels (MCLs). Other contaminants detected in GW included 1,2-dichlorobenzene, methylene chloride, 1,1,1-trichloroethane and 1,1,2-trichloroethane, which never exceeded their respective MCLs.

Institutional Controls

Hand Craft entered into a Facility Lead Agreement (FLA) in June 2002 with the US EPA and committed to conducting remediation activities in accordance with the RCRA Corrective Action Program. The GW Remediation activities and Corrective Action monitoring at the facility are being implemented in accordance with the conditions and requirements of the FLA and the *Groundwater Monitoring and Remediation Plan* prepared October 1999 and currently being updated.

Community Involvement

Citizens' questions and concerns may be directed to the DEQ contact below. Also, the Administrative Record containing relevant information is available for public review at the following location(s):

Virginia Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23219
Phone: (804) 698-4126
Contact: Fuxing Zhou

The EPA will issue a public notice of a tentative determination and solicit comments prior to making a final Agency determination regarding final corrective action remedies at the facility.

Government Contacts

Please contact the DEQ project manager listed below for details on this project or the contents of this fact sheet.

DEQ Project Manager

Fuxing Zhou
Environmental Engineer Senior
Department of Environmental Quality
629 East Main Street
Richmond, VA 23219
Phone: (804) 698-4126
Fax: (804) 698-4327
e-mail: fzhou@deq.virginia.gov

EPA Project Manager

Mr. Michael Jacobi – 3LC20
USEPA - Region 3
1650 Arch Street
Philadelphia, PA 19103-2029
Phone: (215) 814-3435
Email: jacobi.mike@epa.gov

For more information about EPA's CA program, including Environmental Indicators, please visit EPA's website at: www.epa.gov/reg3wcmd/correctiveaction.htm.

Facility Contact

The facility contact, as listed in the RCRA Permit, is:

Mr. Keith Nichols, Plant Manager
Hand Craft Cleaners
1501 Roseneath Road
Richmond, VA 23220
Phone (804) 358-8671
e-mail: keithnichols@handcraftservices.com

Fact Sheet Update

The next fact sheet update is scheduled for July 2009. Previous fact sheets may be obtained through the above DEQ contact.